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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,897	01/28/2002	Jervant Ulf	100508-09002	3031

7590

01/27/2004

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 01/27/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,897

Applicant(s)

ULF ET AL.

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/9/03 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 14, 15, 17-23, 25-28, and 31-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al. (3,623,203) in view of Morita et al. (JP 405176656A).

Henshaw et al. teach a method of producing a bending-resistant, elongated body comprising: providing an elongated blank 11 having a cavity 16 (fig. 6) extending essentially along the entire length of the blank 11, the cavity 16 having a longitudinal axis, the cavity 16 being enclosed in the blank 11 but for first and second spaced openings at opposite ends of the longitudinal axis, the inner surface 16 of which cavity is at a distance from the mass center (the

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mass center is in the vicinity of numeral 15 in fig. 1) of the blank 11 seen in a section at right angles to its longitudinal axis and is arranged concentrically around the mass center, the blank 11 being formed from a metallic material (col. 1, line 33), inserting a fiber composite body 15 formed from a plurality of fibers in a non-metallic binder 13 into at least one of the first and second openings of the cavity 16, and affixing in the cavity 16 the fiber composite body 15 with an outer surface essentially congruent with the inner surface of the cavity 16, wherein a majority of fibers in the fiber composite body both extend essentially parallel to the longitudinal axis of the elongated blank 11 and are elongated along the whole of its length.

Henshaw et al. teach the invention cited with the exception of the blank 11 shown in fig. 1 having at least three cavities and affixing fiber composite bodies in the cavities. It is noted however, that Henshaw et al. teach other embodiments with blanks 11 having more than one cavity with fiber composite bodies 15 in the cavities (see fig. 2-4).

Morita et al. teach that it is known to make blanks 1 that have at least three fiber composite bodies 2 arranged in the blanks 1.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Henshaw et al. with at least three cavities and affixing fiber composite bodies in the at least three cavities, in light of the teachings of Morita et al., in order to obtain the desired combination of stiffness and weight reduction of the blank.

Regarding claims 15 and 22, affixing comprises gluing the fiber composite in the cavity (col. 4, lines 6-39).

Regarding claims 17, 23, and 28 note that epoxy is used for gluing (col. 4, line 22).

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Regarding claims 18 and 21, carbon fiber in an epoxide matrix is used as the fiber composite body (col. 3, lines 74-75, graphite filaments is carbon fiber).

Regarding claims 19, 26, and 32-35, Morita et al. teach fibers arranged with equal pitch symmetrically around the mass center of the blank seen in a section at right angles to its longitudinal axis. The elongated body has a predetermined desired natural frequency because it is designed for different types of applications (col. 1, lines 26-31 of Henshaw et al.).

Regarding claim 25, the beam is extruded (col. 1, line 43).

Regarding claim 31, note that in fig. 1, the bending resistant body is shaped like a spindle (cylindrical in shape like the body shown in fig. 1 of applicant's drawing). Regarding the recitation that the spindle is used for carrying paper reels, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

4. **Claims 16 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al. in view of Morita et al.

Henshaw et al./Morita et al. teach the invention cited with the exception of shrinking the cavity to the fiber composite body.

At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have provided the invention of Henshaw et al, with shrinking the cavity because applicant has not disclosed that shrinking provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art,

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furthermore, would have expected applicant's invention to perform equally well with either the gluing taught by Henshaw et al. (or claimed in applicant's claim 15) or the claimed shrinking because both affixing methods perform the same function of securing the composite body in the cavity equally well. Therefore, it would have been an obvious matter of design choice to modify Henshaw et al./Morita et al. to obtain the invention as specified in claims 16 and 24.

5. **Claims 29 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al. in view of Morita et al. as applied to claims 14 and 20 above, and further in view of Mahoney et al. (5,207,848).

Henshaw et al./Morita et al. teach the invention cited except that Henshaw et al. teach a solidly formed tubular fiber composite body **15** (see fig. 2) instead of the claimed tubular composite body having a central bore devoid of fibers.

Mahoney et al. teach a fiber composite body **16** that is tubular and has a central bore devoid of fibers.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Henshaw et al./Morita et al. with a tubular composite body that has a central bore devoid of fibers, in light of the teachings of Mahoney et al., in order to reduce the weight of entire the roll.

Response to Arguments

6. Applicant's arguments with respect to claims 14-35 have been considered but are moot in view of the new ground(s) of rejection. Applicant has added the limitation "at least three

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cavities” in the independent claims 14, 20, 27, and 31 which changes the scope of the claims.

Claims 32-35 are new claims which were not previously considered.

7. In response to applicant’s argument that one large concentric cavity would be preferable over a configuration of a smaller concentric cavity with several other small cavities located a distance from the mass center of the blank in Henshaw et al., it is noted that Henshaw et al. gives multiple embodiments of how reinforcing fibers could be used to reinforce a blank 11. Therefore, other embodiments could be used to reinforce the blank 11 other than that shown in fig. 1 of Henshaw et al. As shown by Morita et al., it is known to reinforce a blank by differently orienting reinforcing fibers 2. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to have provided the invention of Henshaw et al. with the fiber arrangement shown by Morita et al., in order to obtain the desired combination of stiffness and weight reduction of the blank. Although Morita et al. teach a rubber blank rather than a metal blank, it is noted that Morita et al. still teaches that it is known to arrange fiber reinforcements 2 in different configurations throughout the blank. Therefore, Morita et al. is analogous art to Henshaw et al. because they are both concerned with reinforcing a blank using fibers. Furthermore, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331. Therefore, it would have been obvious to replace the rubber of Morita et al. with the metal of Henshaw et al.

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Contact Information

8. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
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MJ

January 21, 2004